



## **2015 CARBON NEUTRAL ACTION REPORT**

**School District No. 78 (Fraser Cascade)**

**Natalie Lowe-Zucchet, CA**

**Secretary-Treasurer**

**650 Kawkawa Lake Road**

**Hope, BC V0X 1L4**

**May, 2016**

## 2015 CARBON NEUTRAL ACTION REPORT – SD #78 (Fraser-Cascade)

This Carbon Neutral Action Report for the period January 1<sup>st</sup>, 2015 to December 31<sup>st</sup>, 2015 summarizes our emissions profile, the total offsets to reach net-zero emissions, the actions we have taken in 2015 to reduce our greenhouse gas emissions and our plans to continue reducing emissions in 2016 and beyond.

By June 30, 2016, School District # 78 (Fraser-Cascade)'s final *Carbon Neutral Action Report* will be posted to our website at [www.SD78.bc.ca](http://www.SD78.bc.ca).

### Overview

On behalf of School District No. 78 (Fraser Cascade), we are pleased to submit the 2015 Carbon Neutral Action Report. The District is committed to continuing to provide environmental leadership by sharing knowledge and best practices around environmental sustainability with our staff, students and public. The District is continuing to provide resources for energy efficient facility upgrades and employee and student training to continue to raise awareness of the importance of sustainability.

Energy savings and emissions reductions continue to be a focus in our commitment toward carbon neutrality. All decisions made on building improvements are made through the lens of energy savings. We continue to upgrade our facilities through heating control upgrades and further lighting upgrades.

As part of our 2015 energy savings program the District completed the upgrade to the entire lighting system including sensors for one of our elementary schools. We have also completed a complete mechanical upgrade of another elementary school which will cut our gas bill by about 50%. We have included other projects for mechanical upgrades as a high priority on our capital plan and recently received funding of \$300,000 for an upgrade of another boiler system in Boston Bar Elementary Secondary School.

The District has continued to make strides in going paperless. Our paper consumption dropped 10% over the prior year. Although we do not use 100% recycled paper, we have moved to purchasing paper that is harvested through sustainable forestry practices and meets the global forest management standards of the Forest Stewardship Council (FSC). We are also not providing paper copies at meetings and this has been well received by our partner groups. All of our agendas can now be found on Google Calendar for review and therefore can be stored in this format as well.

## 2015 CARBON NEUTRAL ACTION REPORT – SD #78 (Fraser-Cascade)

We are continuing to encourage car-pooling when feasible and have seen the Trustees take on a leading role in this area. We are also encouraging the same behaviour with staff when possible.

We continue to provide education to our bus drivers, on bus driving technologies to both reduce emissions and improve the performance of our buses. This is an annual event to maintain the awareness and remind people of good practice.

For 2015, the School District's total emissions are 688 tonnes of CO<sub>2</sub>e (2014 – 839 tonnes, 2013- 1075, 2012- 1154 tonnes), which has meant providing an offset of \$17,200 plus GST to the Pacific Carbon Trust.

The Board of Education for School District No. 78 (Fraser Cascade) recognizes the importance of carbon neutrality and continues to endorse all work toward reduction in energy consumption.



Natalie Lowe-Zucchet, CPA C.A.

Secretary-Treasurer


# 2015 CARBON NEUTRAL ACTION REPORT – SD #78 (Fraser-Cascade)

**Emissions and Offsets Summary Table:**

<b>School District No. 78 GHG Emissions and Offsets for 2015 (TCO2E)</b>	
<b>GHG Emissions created in calendar year 2015 (from SMARTTool Homepage)</b>	
Total Emissions	870
Total Emissions for Offsets	688
<b>Adjustments to GHG Emissions Reported in Previous Years (from SMARTTool Homepage)</b>	
Total Emissions	0
Total Emissions for Offsets	0
<b>Credit owing from PCT at end of 2014 reporting year (if applicable – from May 15 Invoice):</b>	
Credit Owing	0
Total Emissions for Offsets for the 2015 Reporting Year (from Offset Invoice):	688

**Retirement of Offsets:**

In accordance with the requirements of the Greenhouse Gas Reduction Targets Act and Carbon Neutral Government Regulation, School District #78 (Fraser-Cascade) is responsible for arranging for the retirement of the offsets obligation reported above for the 2015 calendar year, together with any adjustments reported for past calendar years. The Organization hereby agrees that, in exchange for the Ministry of Environment ensuring that these offsets are retired on the Organization’s behalf, the Organization will pay the associated invoice to be issued by the Ministry in an amount equal to \$25 per tonne of offsets retired on its behalf plus GST.

	May 31, 2016
NATALIE LOWE	SEC. TREASURER
Signature	Date
Name (please print)	Title

# 2015 CARBON NEUTRAL ACTION REPORT – SD #78 (Fraser-Cascade)

## Totals Calendar Year 2015, School District 78 - Fraser - Cascade

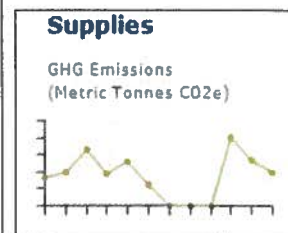
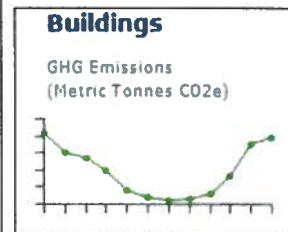
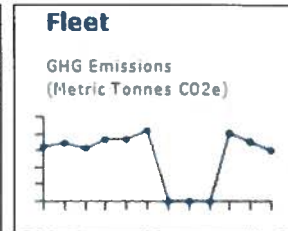
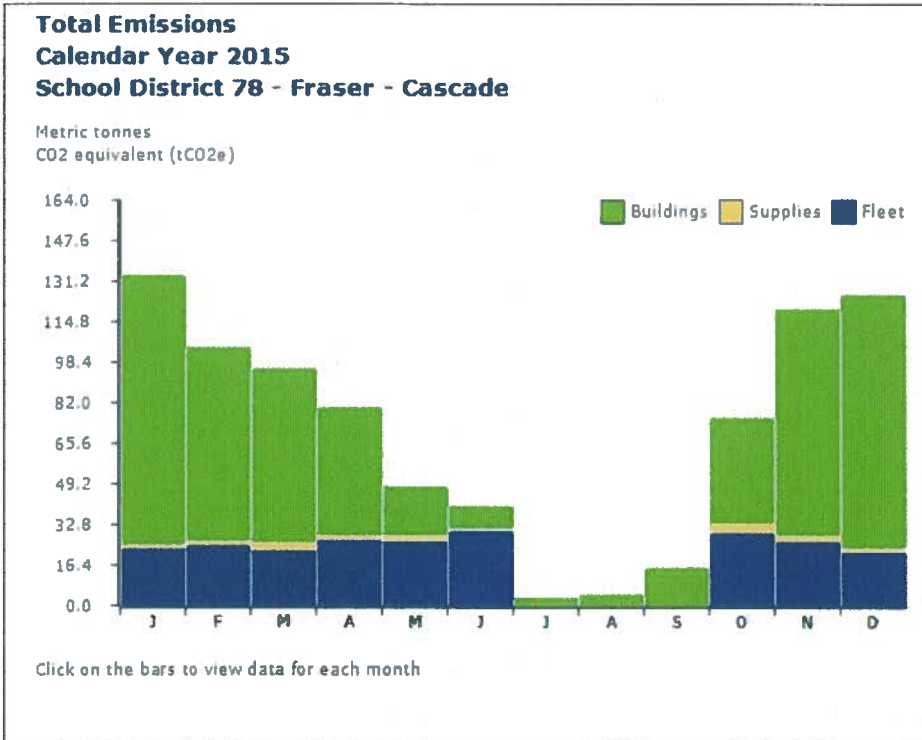
	Measure	Quantity	Greenhouse Gases in Tonnes				
			CO <sub>2</sub>	BiCO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	tCO <sub>2</sub> e <sup>1</sup>
<b>Scope 1 (Direct) Emissions</b>							
Mobile Combustion (Fleet)	Litres	90,315.79	224.37	8.45	0.01	0.02	239.93
Stationary Combustion, Reported <sup>3</sup>	GigaJoules	11,628.22	586.25	0.00	0.01	0.01	590.78
<b>Scope 2 (Indirect) Emissions</b>							
Purchased Energy, Reported <sup>3</sup>	GigaJoules	6,558.89	18.36	0.00	0.00	0.00	18.36
<b>Scope 3 (Business Travel and Office Paper) Emissions</b>							
Office Paper	Packages	3,600.00	21.02	0.00	0.00	0.00	21.02
<b>Total Emissions, Calendar Year 2015</b>			<b>850.00</b>	<b>8.45</b>	<b>0.02</b>	<b>0.04</b>	<b>870</b>
<b>Carbon Neutral or Offset Exempt</b>			<b>170.51</b>	<b>8.45</b>	<b>0.01</b>	<b>0.01</b>	<b>182</b>
<b>Total for Offsets<sup>4</sup></b>			<b>679.49</b>	<b>0.00</b>	<b>0.02</b>	<b>0.03</b>	<b>688</b>

1. Each greenhouse gas has been converted to a standard measurement (tCO<sub>2</sub>e) by multiplying its emissions by its global warming potential (GWP). The GWP of carbon dioxide (CO<sub>2</sub>) from both anthropogenic and biogenic sources is 1; methane (CH<sub>4</sub>) is 25, and nitrous oxide (N<sub>2</sub>O) is 298. The Totals for tCO<sub>2</sub>e are shown here rounded to the nearest whole metric tonne as only whole tonnes of tCO<sub>2</sub>e can be purchased for offsets.

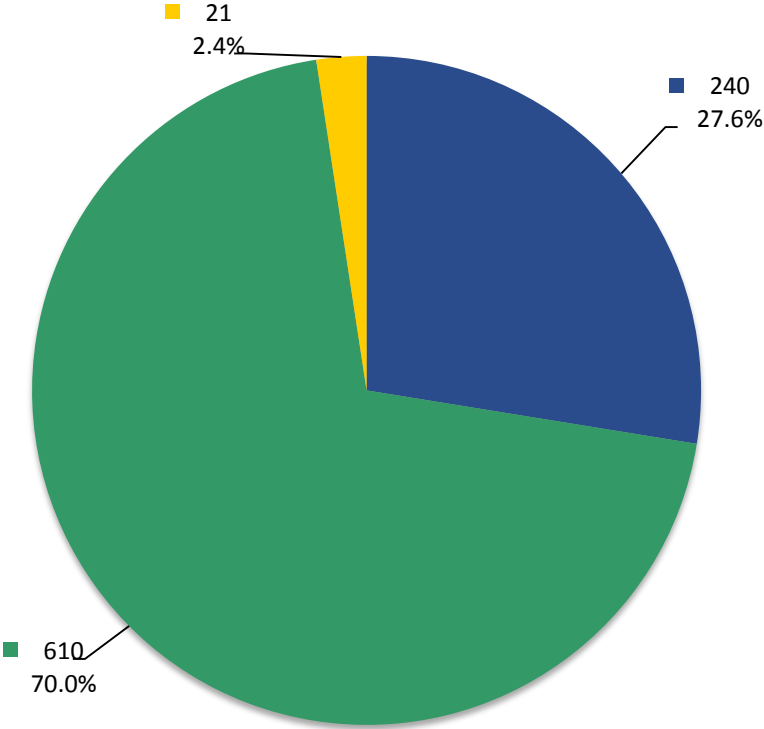
2. Estimated data has been calculated based on the methods described in the Methodology Document.

3. Reported data refers to consumption which has been directly billed to the organization.

4. The tCO<sub>2</sub>e value from the "Total for Offsets" line represents the quantity of offset purchases required to become carbon neutral.



**School District 78 - Fraser - Cascade  
Greenhouse Gas Emissions by Source  
for the 2015 Calendar Year (tCO<sub>2</sub>e\*)**



**Total Emissions: 871**

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

**Offsets Applied to Become Carbon Neutral in 2015 (Generated May 25, 2016 10:24 AM)**  
 Total offsets required: **689**. Total offset investment: **\$17,225**. Emissions which do not require offsets: **182** \*\*

\*Tonnes of carbon dioxide equivalent (tCO<sub>2</sub>e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

\*\* Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.

# 2015 Carbon Neutral Action Report Survey

Organization Name:

*School District No. 78 (Fraser Cascade)*

Please select your sector:

- School District

1) Stationary Sources (Buildings, Power Generators, Ext. Lighting) Fuel Combustion, Electricity use, Fugitive Emissions:

Please indicate which actions your PSO took in 2015:

Have developed an overall strategy/plan to reduce energy use in your organization's buildings inventory:

*Yes*

If Yes, please describe:

*Upgraded the heating and ventilation system at Kent Elementary School for 1.3M and upgraded the lighting of Silver Creek Elementary for 160,000*

Undertook evaluations of building energy use:

*Yes*

Performed energy retrofits on existing buildings:

*Yes*

Built or are building new LEED Gold or other "Green" buildings:

*No*

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from buildings:

*We are installing a DDC system for the entire district by moving to the same systems in all buildings. We are also retrofitting many of our schools and buildings where possible with LED lighting. We are also putting lighting sensors in classrooms. We are hoping to see a reduction in electrical consumption of 30-40%*

2) Mobile Sources (Fleet, Off-road/Portable Equipment) Fuel Combustion:

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to support systematic reductions in fleet related emissions:

(e.g., program to convert fleet to renewable fuels)

Yes

If Yes, please describe:

*We continue to provide annual bus driver education to ensure drivers do what they can to reduce emissions. We have maximum speed limits set on our buses and enforce turning vehicles off when not moving.*

Replaced existing vehicles with more fuel efficient vehicles (gas/diesel):

Yes

Replaced existing vehicles with hybrid or electric vehicles:

No

Took steps to drive less than previous years:

Yes

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from fleet combustion:

*We are doing more teleconferencing where it makes sense and encouraging car-pooling.*

3) Supplies (Paper):

Indicate which actions your PSO took in 2015:

Have put in place an operations policy/program to facilitate a systematic reduction in paper-related emissions:

(e.g., policy to purchase 100% Recycled Content; default to double-sided printing)

No

If yes, please describe:

*(No response)*



Have put in place an operations policy/program to facilitate behavioural changes from paper use:

(e.g. awareness campaign to reduce paper use):

*Yes*

If yes, please describe:

*We continue to try to encourage the purchasers to buy recycled paper. not an easy sell as often it costs more and jams more easily in copiers.*

Used only 100% recycled paper:

*No*

Used some recycled paper:

*Yes*

Used alternate source paper:

(e.g., bamboo, hemp, wheat etc.)

*No*

Please list any other actions, programs or initiatives that your organization has introduced that support emissions reductions from paper supplies:

*(No response)*

4) Other Sustainability Actions:

Please note that this section is optional

Business Travel

Created a low-carbon travel policy or travel reduction goal:

(low-carbon = lowest emission of greenhouse gas per kilometer per passenger)

*No*

Encouraged alternative travel for business:

(e.g. bicycles, public transit, walking)

*No*

Encouraged or allow telework/working from home:

*No*

Other:

*(No response)*

Education Awareness

Have a Green/Sustainability/Climate Action Team:

*No*

Supported green professional development:

(e.g. workshops, conferences, training)

*Yes*

Supported or provided education to staff about the science of climate change, conservation of water, energy and/or raw materials:

*No*

Other:

*(No response)*

## Adaptation Planning for Climate Risks

Have assessed whether increased frequency of extreme weather events and/or long term changes in climate will affect your organization's infrastructure, its employees and/or its clients:

*No*

Have incorporated these anticipated changes in climate into your organization's planning and decision making:

*No*

Other:

*(No response)*

## Other Sustainability Actions

Established a water conservation strategy which includes a plan or policy for replacing water fixtures with efficient models:

*Yes*

Have put in place an operations policy/program to facilitate the reduction and diversion of building occupant waste stream from landfills or incineration facilities:

(e.g., composting, collection of plastics, batteries)

*Yes*

Established green standards for goods that are replaced infrequently and/or may require capital funds to purchase:

(e.g., office furniture, carpeting, etc.)

*No*

Incorporated lifecycle costing into new construction or renovations:

*Yes*

Please list any other sustainability actions your organization has taken not listed above:

*(No response)*